READER OPENING – POSSIBLE PROBLEMS

This documents describes possible problems with opening communication with the reader on Windows, Linux and MacOS and their solving

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Possible problems on Windows

When you plug in your device for the first time which uses FTDI (Future Technology Device International) for USB communication with PC, you need to:

- Allow Windows to download drivers (DLL) for FTDI from Windows Update service
- If there is a problem with downloading drivers from Windows Update you need to download drivers manually from FTDI website: https://www.ftdichip.com/Drivers/D2XX.htm

Possible problems on Linux

If there are problems with opening communication with uFR Series device, check for:

- **Access violation problems:**
  Does your user, which is not root have a permission for usb devices?

  If not, download i run the script as a root user and add current user to group which have permissions for access usb devices.
  Script link:
  https://www.d-logic.net/code/nfc-rfid-reader-sdk/ufr-linux-usb_permission_script.git

  Example:

```
srkos@ubuntu:~$ sudo ./USB_Permissions_Script_for_Linux.sh
[sudo] password for srkos:
Enter an existing user  :srkos
Adding user `srkos' to group `usb_access' ...
Adding user srkos to group usb_access
Done.
```

- **Problems with FTDI kernel modules**
  Check if some other kernel modules are loaded, type:
  `lsmod | grep ftd`

```
# lsmod | grep ftd
Module                  Size  Used by
ftdi_sio               26993  0
usbserial              21409  1 ftdi_sio
```

  If they are loaded, remove them with command:
  `Sudo rmmod ftdi_sio usbserial`

To permanently disable kernel modules loading after plugging-in uFR Series device, you need to create and edit file **ftdi.conf** as a super user:

Create file **ftdi.conf** and put it in /etc/modprobe.d/ftdi.conf
Put next in the file and save it:

```
#disable auto load FTDI modules - D-LOGIC
blacklist ftdi_sio
blacklist usbserial
```

After you finished, restart the system.

Possible problems on MacOS

- **FTDI drivers**

  It is necessary to download ftd2xx drivers from FTDI website for MacOS: https://www.ftdichip.com/Drivers/D2XX.htm

  Follow the instructions from the same archive to install necessary files.

- **Problems with other kernel extensions**

  For successfully opening communication with uFR Series device you need to check If any other FTDI module is loaded and if it is, deactivate it.

  - Plug in uFR Series device i wait for a couple of seconds
  - Open console
  - Type: `sudo dmesg` to check if device is detected:

```
$ sudo dmesg
FTDIUSBSerialDriver:        0  **4036001** start - ok
```

  - Check if kernel extension is loaded for FTDI, type:

    `kextstat | grep -i ftdi`

```
$ kextstat | grep -i ftdi
  94    0 0xffffff7f82041000 0x8000     0x8000
**com.FTDI.driver.FTDIUSBSerialDriver** (2.2.18) <70 34 5 4 3 1>
```

  - To deactivate it, type:

```
Sudo kextunload /System/Library/Extensions/FTDIUSBSerialDriver.kext
```

Note:

If you use **OS X 10.11 (El Capitan)**, aftert deactivating FTDI module it will be reactivated.

To prevent this, you need to download Helper from FTDI website and run it on the machine, and restart the system.

Also, other driver is loaded on El Capitan:

```
$ kextstat | grep -i ftd
  146    0 0xffffff7f82d99000 0x7000     0x7000
com.apple.driver.AppleUSBFTDI (5.0.0) D853EEF2-435D-370E-AFE3-DE49CA29DF47
<123 38 5 4 3 1>

$ sudo kextunload /System/Library/Extensions/AppleUSBFTDI.kext
```

After you finished, uFR Series devices are ready for work.

Revision history

Date	Version	Comment
2019-04-09	1.0	Base document